

immuno4  
SEQUENCE LISTING

&lt;110&gt; AUCKLAND UNISERVICES LIMITED

&lt;120&gt; IMMUNOMODULATORY CONSTRUCTS AND THEIR USES

&lt;130&gt; 503958-142

&lt;150&gt; NZ 519371

&lt;151&gt; 2002-06-04

&lt;160&gt; 13

&lt;170&gt; PatentIn version 3.1

&lt;210&gt; 1

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Streptococcus pyogenes

&lt;400&gt; 1

Leu Glu Val Asp Asn Asn Ser Leu Leu Arg Asn Ile Tyr Ser Thr Ile  
1 5 10 15Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Asn  
20 25 30Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile  
35 40 45Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp  
50 55 60Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys  
65 70 75 80Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys  
85 90 95Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys  
100 105 110

## immuno4

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val  
 115 120 125  
 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln  
 130 135 140  
 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val  
 145 150 155 160  
 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Phe Tyr  
 165 170 175  
 Val Gly Tyr Arg Asp Lys Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn  
 180 185 190  
 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp  
 195 200 205

Ser

&lt;210&gt; 2

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; streptococcus pyogenes

&lt;400&gt; 2

Leu Glu Val Asp Asn Asn Ser Leu Leu Arg Asn Ile Tyr Ser Thr Ile  
 1 5 10 15  
 Val Tyr Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys  
 20 25 30  
 Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile  
 35 40 45  
 Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp  
 50 55 60  
 Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys  
 65 70 75 80  
 Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys  
 85 90 95  
 Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys  
 100 105 110

## immuno4

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val  
 115 120 125  
 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln  
 130 135 140  
 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val  
 145 150 155 160  
 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr  
 165 170 175  
 Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn  
 180 185 190  
 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp  
 195 200 205  
 Ser

&lt;210&gt; 3

&lt;211&gt; 209

&lt;212&gt; PRT

&lt;213&gt; Streptococcus pyogenes

&lt;400&gt; 3

Leu Glu Val Asp Asn Asn Ser Leu Leu Arg Asn Ile Tyr Ser Thr Ile  
 1 5 10 15  
 Val Ala Glu Tyr Ser Asp Ile Val Ile Asp Phe Lys Thr Ser His Cys  
 20 25 30  
 Leu Val Thr Lys Lys Leu Asp Val Arg Asp Ala Arg Asp Phe Phe Ile  
 35 40 45  
 Asn Ser Glu Met Asp Glu Tyr Ala Ala Asn Asp Phe Lys Thr Gly Asp  
 50 55 60  
 Lys Ile Ala Val Phe Ser Val Pro Phe Asp Trp Asn Tyr Leu Ser Lys  
 65 70 75 80  
 Gly Lys Val Thr Ala Tyr Thr Tyr Gly Gly Ile Thr Pro Tyr Gln Lys  
 85 90 95  
 Thr Ser Ile Pro Lys Asn Ile Pro Val Asn Leu Trp Ile Asn Gly Lys  
 100 105 110

## immuno4

Gln Ile Ser Val Pro Tyr Asn Glu Ile Ser Thr Asn Lys Thr Thr Val  
 115 120 125  
 Thr Ala Gln Glu Ile Asp Leu Lys Val Arg Lys Phe Leu Ile Ala Gln  
 130 135 140  
 His Gln Leu Tyr Ser Ser Gly Ser Ser Tyr Lys Ser Gly Arg Leu Val  
 145 150 155 160  
 Phe His Thr Asn Asp Asn Ser Asp Lys Tyr Ser Phe Asp Leu Leu Tyr  
 165 170 175  
 Val Gly Tyr Arg Asp Gln Glu Ser Ile Phe Lys Val Tyr Lys Asp Asn  
 180 185 190  
 Lys Ser Phe Asn Ile Asp Lys Ile Gly His Leu Asp Ile Glu Ile Asp  
 195 200 205

Ser

&lt;210&gt; 4

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Primer

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27

&lt;210&gt; 5

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; PRIMER

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27

&lt;210&gt; 6

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; PRIMER

## immuno4

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24

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<211> 26

<212> DNA

<213> PRIMER

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26

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<211> 22

<212> DNA

<213> PRIMER

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22

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23

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<212> DNA

<213> PRIMER

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23

<210> 11

<211> 23

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<213> PRIMER

immuno4

<400> 11  
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23

<210> 12  
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<212> DNA  
<213> PRIMER

<400> 12  
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18

<210> 13  
<211> 18  
<212> DNA  
<213> PRIMER

<400> 13  
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18